G. R. S. 59] GPB—15,000—22-7-14

GENERAL AND REVENUE SECRETARIAT.

1914-15.
(Sanitary)

File No. 76 13

Serial No. 1.

Papers Filed.

Month January 1915.

SUBJECT.

Scheme for the improvement of water supply in villages.

PREVIOUS REFERENCES.	LATER REFERENCES.
Sanit 143-12 C 1-5 Sanit 107-12 C 1-4	Sanit 116-16 Sec 1-3

N 15/E

Bulgin 11-1-15.

4017

G.R.S. 11] 1913-14

GENERAL AND REVENUE SECRETARIAT.

(Sanitary)

NOTES.

File No. 76-13

FILE HEADING.

Scheme for the improvement of water supply in villages.

From

The Sanitary Commissioner

No. 2826 Dated 15. 1. 14 Received 16. 1. 14

Diary No. 4017	Enclos. / Spare Copies.	Serial No. /

BRIEF ABSTRACT OF LETTER.

Recommends that in view to effectively safeguard against Cholera epidemics, an annual grant of one lakh of rupees may be allotted from provincial funds to initiate an organised scheme for the improvement of existing water supply in villages.

NOTES AND ORDERS.

The object of the scheme is primarily to safeguard against cholera epidemics but also to the prevention of all other water-borne diseases. A recommendation on this subject was made by the Sanitary Commissioner in September 1907, but it was confined only to a special survey being made of

NOTES—First Sheet.

GPB—85,000—15-6-12

Serial No.

The existing sources of water supply in towns and villages on which to base future programme of work (vide Govt. Proc. No. 5508-21 dated the 10 December 1907). Sam 108-07-2

2. The present recommendation is on the lines of the action being taken by the Madras Govt. who in their order No. 247 L. dated the 12th February 1913 have sanctioned a grant of five lakhs from provincial funds for distribution among the various Municipalities in the Presidency to improve water supplies in villages with a view to check the outbreak of cholera.

3. In this connection it is submitted that proposals for sinking new wells at an estimated cost of Rs 1,89,533/- is under consideration of Govt. (Sanitary file No. 38 of 1912-13)

4. As regards the new wells the Sanitary Commr. in his memo. states that except in cases of scarcity of water people generally avoid to go to new wells sunk during the outbreak of cholera and they prefer to go to the wells to which they have long become accustomed.

Submitted for orders.

57
23.1.14

5 This may be included in Sam's file 38 of 1912 & Govt. reminded, after the needful

NOTE—Contn. sheet.

GPB—60,000—7-11-13

G. R. S. 12]

4017 3

General and Revenue Secretariat.

Sm File No. 76 of 1913-14

Serial No.

1997
17-6-14

Reports and work it up early

Bom
23/1

The reference kindly seen discussion on Govt. proc. No 5248-59 dated the 6th January 1915. The letters Sm 38-12-38 may be taken.

SM
20.1.15

Bom
25/1

GPB—60,000—7-11-13

W 66/1 Rw

191

From

The Resy. Commissioner
in Nyasa

To

The Secretary to Govt.
Zan. & Nas. Depts

Dated

Despatched 15th January 1914

Received

General No. 2828

No.

Enclosure No. One

Re submitting a scheme
for the encouragement of
Natural Water-supplies in
Nyasa

GPB—50,000—26·9·12

D 4017
No 2828
Encl

Office of the Sanitary Commissioner
with the Government of Mysore,

Bangalore dated the 15th January 1914

From

Rao Bahadur
T.V. Arumugam Mudaliar Esq.,
Sanitary Commissioner with the
Government of His Highness the
Maharaja of Mysore, Bangalore

To

K.R. Srinivasa Iyengar Esq., M.A.,
Secretary to the Government of His
Highness the Maharaja of Mysore,
General & Revenue Departments,
B a n g a l o r e .

San 76-13
Sl-1

Sir,

With reference to para 2 of Government Order No. 8318-9 Sany. 107-12-4 dated the 19th April 1913, I have the honor to forward herewith for the orders of Government copy of memo drawn up by the Deputy Sanitary Commissioner on the subject of the improvement of rural water-supplies in Mysore. So far as I know, practically nothing has been done to improve the water supply in villages. Apart from a consideration of the effect on the general health of the people which a system of protected rural water-supplies produces, the question of providing each town or village with at least one properly covered-in well is of the utmost practical importance in view to effectively safe-guard against Cholera epidemics The enclosed statement shows that Cholera claims annually about 2000 victims and much of this loss of life might be prevented if only there were in existence a systematic arrangement for providing sources of supply of good water properly guarded against contamination

2. Recently the Madras Government have initiated an organised attempt in this direction and have sanctioned an annual allotment to District Boards of 5 lakhs from provincial funds (1913-14), for the protection of some 500 wells by the provision of pumps and other improvements. This allotment works out 0.12 lakhs per mille of population in the Presidency. On a similar, though slightly higher basis, I would recommend a lumpsum annual grant of 1 lakh for Mysore to be distributed among the District Boards, each District being allotted a sum varying from Rs. 10000 to 15000 according to requirements.

3. I am of opinion that in the beginning we need, as in Madras, only confine ourselves to the improvement of existing sources of water supply and gradually extend the scope of the operations in the light of the experience gained. The villages along the frontier and along the trade and pilgrim routes require to be attended to first, next the villages where large weekly fairs are held and then the wells in places where large numbers of people congregate at particular seasons of the year.

4. The Deputy Commissioners should in consultation with the District Sanitary Officer personally select the villages and towns in which the trial should be made. Before actually executing the work however, it is essential that the plans and estimates in respect of the improvements proposed should be scrutinized by the Central Sanitary Board so that the plans are in conformity with the approved types, as far as possible. I may add that the Sanitary Engineer, Sanitary Division recommends the following standard designs:-

(1) Draw-well with pulley and bucket arrangement.

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arrangement. Cost Rs. 1500 to 2000.

(2) well fitted with semi rotary pump. Cost Rs. 2000 to 2500

(3) Well fitted with a pump and iron tank with taps, cost Rs. 2500 to 3000.

(4) Well fitted with pumps, elevated masonry reservoir and distribution pipes with taps, cost Rs. 10000 and upwards

The type designs with specifications are under preparation in his office.

5. If sanction is accorded to the inclusion of the grant recommended, in the Budget for 1914-15 I shall obtain from the Presidents of the District and Municipal Boards a statement of the allotment required for each District and submit the same for the Orders of Government.

I have the honor to be,
Sir,
Your most obedient servant,

Sanitary Commissioner.

P.H.

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Statement showing the Deaths registered from Cholera during the 10 years ending 1911.

Year.	Cholera.	
	No.	Ratio per mille.
1902.	218	0.04
1903.	98	0.02
1904.	471	0.09
1905.	644	0.12
1906.	7223	1.33
1907.	4972	0.91
1908.	2449	0.45
1909.	1629	0.30
1910.	1812	0.33
1911.	201	0.04
Total ...	19717	
Mean for ten years	1972	0.36

for Sanitary Commissioner.

P.H.

Memo on Rural water supplies in Mysore.

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The fact that cholera is a water-borne disease is so well recognised that no epidemiological statistics need be quoted here to prove the point. In places where a filtered water supply is provided through pipes, cholera rarely, if ever, occurs. The outbreaks of Cholera in towns and villages where there is no protected water supply is always due to the infection of wells or banks by the excreta of actual cholera patients or of cholera carriers. It is the outlying villages that are most open to infection and the epidemics can best be prevented by adopting suitable measures for the improvement and protection of rural water supplies. Other water borne diseases e-g Typhoid fever, dysentery, diarrhoea, round worms, guinea-worms etc can be effectually checked by providing the villagers with drinking water which is not exposed to infection by any and every body.

In the course of my visits to the various infected places during the last cholera epidemic, I noticed that each village has generally one or at most two wells to which the people resort for their drinking water. New wells sunk for the occasion by the Revenue authorities are mostly avoided, the people prefering to go to the wells to which they have long become accustomed. This fact

fact forcibly struck me at Pavagada where a new well had been constructed for the special use of Holayars but they gave it a wide berth, in favor of the old well which contained a scanty supply of dirty water. It is only when there is any scarcity of water that people clamour for new wells. Therefore the question of sinking new wells may be deferred for the present, all the available resources being spent on the protection of water in the existing wells.

It is generally from outside the Mysore territory that Cholera cases and carriers are imported and the water sources infected. Therefore the villages along the frontier and along the trade and pilgrim routes should receive the first attention and the wells in those places supplying drinking water require efficient protection. Next, the wells in the villages where large weekly fairs are held must be taken up. Then the wells in places of pilgrimage where large numbers of people congregate at particular seasons of the year, must have their turn. When the benefits of a protected water supply are perceived by the people in the rest of the villages of each Taluk, they themselves will ask for a similar boon.

The Deputy Commissioners of Districts in consultation with the Amildars and other members of the District Boards and Municipalities will select the villages where the experiment of protecting the wells from contamination may be tried. About ten thousand

thousand rupees may be allotted for each District for this purpose in the first year and the amount may be varied in the subsequent years according to the needs of the District and the success of the scheme.

Before spending any money on protective measures, the local authorities must have proper data to show whether each well proposed to be taken up, can yield a quantity of water sufficient for the local needs. This can easily be calculated on the spot. The water must also be sent to the Public Health Institute where after chemical analysis, its potability or otherwise can be determined. It is only when the water is good in quality and abundant in quantity that further steps can be taken to protect it from contamination. These are (1) construction of a masonry platform round each well (2) a collecting drain round the platform (3) a drain leading off the waste water to a distance of at least 150 feet from the well.(4) a permanent covering for the well with a manhole for emergencies (5) fitting up the well with four semi-rotary pumps (6) plastering the interior of the well with cement to a depth of at least 20 feet below ground level.

Prior to covering up the well, any silt from it must be removed. Of the four pumps, one should be kept under lock and key and reserved for use when the other pumps get out of order. The other three pumps may be used by the several communities and will obviate the necessity for a long wait at the well.

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well. The Sanitary Engineer to the Government of Madras has estimated the cost of the improvements to amount approximately to Rs. 1025/- for each well. This sum does not include the cost of the pumps which are supplied free by the Madras Government. Each District must also have a small reserve of pumps and spare parts to replace breakages.

Some recurrent expenditure will be required to keep the pumps in good working order. A competent mechanic getting a pay of Rs. 60/- with the usual travelling allowances must be provided for each District. During the initial stages, one mechanic may look after the wells in two Districts. He must be provided with a small work-shop at some central place and have a trained artisan to assist him.

While the whole scheme is in an experimental stage, there must be expert Engineering supervision which may be gradually dispensed with, when the local Engineering staff has learnt how to construct and maintain protected wells and when the villagers have become accustomed to using pumps with a reasonable degree of care.

If a well is to be provided with an overhead iron tank into which water may be pumped ready for use, " the kite motion double barrel pump " will be necessary and coolies will have to be employed to pump the water daily. The approximate cost of this is said to be Rs. 2050/-. Larger Unions and smaller

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smaller Municipalities may go in for this arrangement, if tney can afford the cost.

M.A., M.D., D.P.H.,

Deputy Sanitary Commissioner.

P.H.

10

Sinking Draw-wells in Villages of the State.

No. 5218-59—San. 38-12-38, dated 6th January 1915

GOVERNMENT OF MYSORE.

GENERAL AND REVENUE DEPARTMENTS.

Read—

Letter No. 96, dated the 14th August 1912, from the Deputy Commissioner, Chitaldrug District, requesting sanction from State Funds to an annual grant of Rs. 20,000 for a period of five years, for providing draw-wells in as many villages of the district as possible with a view to prevent epidemics of cholera in the district, as the District Board is unable to meet the cost in question though it is a legitimate charge on its funds.

2. Letter No. 2828, dated the 15th January 1914, from the Sanitary Commissioner, recommending an annual grant of one lakh of rupees from Provincial Funds for the improvement of existing water-supply in villages in the several districts.

3. Communications from the Deputy Commissioners of Districts furnishing information as to the number of draw-wells to be sunk in the districts, during the next five years, the approximate cost involved, the cost of earthwork to be executed by the villagers and the amount that can be made available from the District Funds for the purpose.

Order No. 5248-59—San. 38-12-38, dated Bangalore, the 6th January 1915.

As more than nine-tenths of the population in the State live in villages the improvement of water supply is a measure of great importance for the prosperity of rural areas. The chief sources of supply in such areas at present are wells, tanks, streams, rivers and irrigation channels. Of these draw-wells are best suited to villages as they can be more easily protected from contamination than other sources of water-supply.

2. The duty of providing good water-supply in villages rests primarily on the District Boards concerned. Under the existing practice, the cost of stone work is contributed by the District Board, the earthwork being done by the villagers. From the statements received from the Deputy Commissioners of Districts it is observed that the number of new draw-wells required in all the districts is about 3,000 and the cost is estimated at about eleven lakhs. The amount that can be made available from District Funds for contributions to works of this character does not exceed on the average Rs. 47,000 annually and taking the cost of eathwork done by the raiyats as equal in amount, it will not be possible according to the arrangements now in force to undertake more than a limited number of such works every year, without a special State grant.

3. Out of the two lakhs of rupees annually provided for village improvement, half a lakh may be made available for sinking and improving wells and a similar amount is now spent from District Funds. In addition to this, Government have decided to make a special grant of one lakh of rupees annually for a period of three years for sinking and improving drinking water wells and have already provided this amount in the current year's budget. The total amount of grant from State and other funds will thus be two lakhs and if an equal amount of contribution is received from the villagers either in cash or in the shape of labour, there should be no difficulty in carrying out all the well works required in about three or four years' time.

4. In order to facilitate the execution of an extensive programme of these works and the utilization of funds to the greatest advantage the following measures are necessary.

(1) Preparation and maintenance of a correct up-to-date list of drinking water wells required to be sunk or improved in each taluk arranged in the order of urgency and importance with complete information as to the contribution which the raiyats are prepared to pay and whether in cash or in the shape of labour.

(2) Selection of the more urgent wells to be undertaken each year at the commencement of each official year and the preparation of a regular working programme according to which the works will be carried out.

(3) Maintenance of a list of wells and statement of works to be executed during the year for the whole district in the offices of the Deputy Commissioner,

for the sub-division in that of the Sub-Division Office and for the taluk in that of the Amildar with clear instructions as to the responsibility of each officer in giving effect to the programme.

(4) Progress reports of the work done should be obtained every month and checked in the District and the Sub-Division Offices. These reports should also be placed before the meetings of the District and Taluk Boards.

5. As far as possible no well should be sanctioned unless the villagers concerned contribute half the cost but in exceptional cases where owing to the poverty of the population or other sufficient cause (such as the well being required for the benefit of the depressed classes the entire amount of contribution cannot be raised) discretion will be given to the Presidents of District Boards to relax the condition. A list of cases in which an exception has been made should be submitted to Government.

6. The Presidents of the District Boards are requested to give wide publicity throughout the villages in the State to the facilities now given to the villagers to provide themselves with wells and to induce the people to raise the necessary funds to meet their share of the cost of constructing the wells.

7. The question of providing each district with proper boring apparatus so that investment of money on wells likely to prove failures may be avoided is engaging the attention of Government but until a cheap and effective apparatus is devised for the purpose local officers will be expected to exercise great care in the selection of sites for wells and before any costly work is commenced, the depth at which water may be found should wherever possible be ascertained by trial pits. The Chief Engineer is requested to furnish Presidents of District Boards with a few simple suggestions for selecting suitable sites for wells. Special attention should be paid in selecting the site to allow of the well being protected from contamination from the flow of drainage water and household sullage into it and of the adoption of other sanitary precautions.

8. The special allotment of one lakh will be treated as a contribution to the Local Funds and a quarterly statement of the wells sanctioned, the amount utilized, the amount of contribution raised by the villagers should be submitted to Government.

9. The sinking of wells should be, as far as possible entrusted to the local village agencies and where this is not possible arrangements may be made to get the work done by local contractors. The Presidents of District and Taluk Boards are expected to see that the work is properly executed and that no bills are paid unless the work has been checked by a responsible officer.

10. Each well as soon as it is constructed should be protected by a suitable parapet and all necessary precautions taken to keep the water free from contamination.

11. The Chief Engineer is requested to prepare and submit by 31st March next a set of simple instructions for sinking drinking water wells with suitable type designs for wells of different kinds.

12. The Sanitary Commissioner is requested to submit at an early date a few rules which may be distributed to Village Committees to help the villagers to maintain village water-supplies in a state of purity and free from pollution.

13. The Presidents of District Boards will intimate at an early date the amount required in each district out of the current year's allotment and take effective steps to utilize the grants placed at their disposal. The allotment required for the next year may be intimated before the end of March.

D. M. NARASINGA RAO,
Offg. Secy. to Govt., Gen. & Rev. Depts.

To—The Sanitary Commissioner in Mysore.
The Deputy Commissioners of Districts and Presidents of the Municipal and District Boards.
The Chief Engineer in Mysore.
The Revenue Commissioner in Mysore.
The Comptroller in Mysore through Branch II.

Exd.—C. R.

Government of Mysore

GENERAL AND REVENUE DEPARTMENTS.

G. O. No. 5248-59—San. 38-12-38, 6th Jan. 1915.

Sinking Draw-wells in Villages of the State.

Passes orders regarding the proposals in the matter of sinking draw-wells in villages of the State as a measure for the prevention of epidemics.

GPB—350—18-1-15